**Read:** All Chapter 53 – Population Ecology

**Videos to watch:**

Bozeman Science:

*“R and K Selection”, “Populations”, “Communities”, “Ecosystems”*

**Population Ecology Objectives:**

1. What factors contribute to the increase/decrease of a population?
2. How can a population be characterized?
3. Compare the exponential and logarithmic models of population growth. Why are they useful models for studying real world populations? What are some of their limitations?
4. How does the mark-recapture method of estimating the size of a population work?
5. Compare the three major ways that members of a population are distributed in the environment.
6. What is demography? Why is it useful for population biologists?
7. Compare the three major survivorship curves that populations demonstrate.
8. Compare and contrast R-selection and K-selection. Provide examples related to number of offspring and the amount of parental care.
9. Discuss the effects of density-dependent factors AND density-independent factors on a population and provide examples of each.
10. How can “invasive species” affect a native population? Give examples.
11. List relevant observations about the growth of the human population from a historical, and modern perspective.
12. What kinds of information do age structure pyramids provide and what inferences can be made from these?
13. How can an ecological footprint be useful?